# Unit 9 · Capstone Project

**WORKSHEET**

Full marks 27

Name _____ Class _____ Roll no. ____ Date _____ Marks _____ / 27

## 1 Key words [4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

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|---|---|---|---|---|---|---|
| **beta** | **decision record** | **definition of done** | **feasibility study** | **patch** | **risk register** | **rollback** |
| **sprint** | **success criterion** | **walking skeleton** | | | | |

Checking, before starting, that a project can be done with the time, skills, money and permissions you have is a _____. A statement of what the finished product will achieve, written so that it can be checked at the end, is a _____. A list of what could go wrong, how likely and how bad each is, and what the team does about it now, is a _____. The thinnest version of the whole product that runs end to end where it will be used, built first, is a _____. The list every piece of work must pass before it counts as finished is the team's _____. Keeping the old version ready to put back if a release fails is called a _____. A release used for real work by its users, still with a safety net, is a _____. A short document giving a decision, the options and the reasons, for later developers, is a _____.

## 2 Multiple choice [5]

Choose the correct option for each of the following questions.

**i.** Which success criterion can be measured? [1]

**a.** The website looks modern.
**b.** Teachers will love the attendance app.
**c.** A teacher takes a class of 40's attendance in under 2 minutes on a phone, without help.
**d.** The app is very secure.

**ii.** Which is an entry in a risk register, rather than an issue? [1]

**a.** The expiry warning shows the wrong date for Chaitra.
**b.** Our user may be away for the immunization campaign in week 6; we will agree a second contact now.
**c.** Add a Nepali version of the report screen.
**d.** The tests for the login screen are missing.

**iii.** Two weeks before the end, a team is behind. Which should it cut? [1]

**a.** a must have, because they take the longest
**b.** a could have, then a should have if it must
**c.** the testing
**d.** the backup, because nobody has lost data yet

**iv.** A test you wrote from a success criterion fails, though the code does what you meant it to. What does this most likely show? **[1]**

**a.** that the test is wrong and should be deleted

**b.** that the code was written from a different reading of the criterion than the test, so check the criterion (with the user if needed) and fix whichever is wrong

**c.** that the computer is broken

**d.** nothing, since the code does what you meant

**v.** A user asks the team to remove the "Are you sure?" step when deleting a record, because it is slow. Testing showed that two people had deleted records by mistake. What is the best response? **[1]**

**a.** Remove it: the user asked.

**b.** Refuse, and say nothing more.

**c.** Keep a way back instead of a question: delete at once, with an Undo for a few seconds and the deleted record kept, so it is fast and mistakes can be put right.

**d.** Hide the delete button.

## 3 Must, should, could, won't **[3]**

Answer the following question.

A team is building an order app for the school canteen's owner. Sort these six into must have, should have, could have and won't have (this time), and give the reason for each won't. a. Record each order, with its items and price. b. The day's total. c. Students pay through a mobile wallet in the app. d. Screens in Nepali and English. e. A chart of the best-selling snacks each month. f. Each student's name and class with every order.

## 4 Release numbers **[2]**

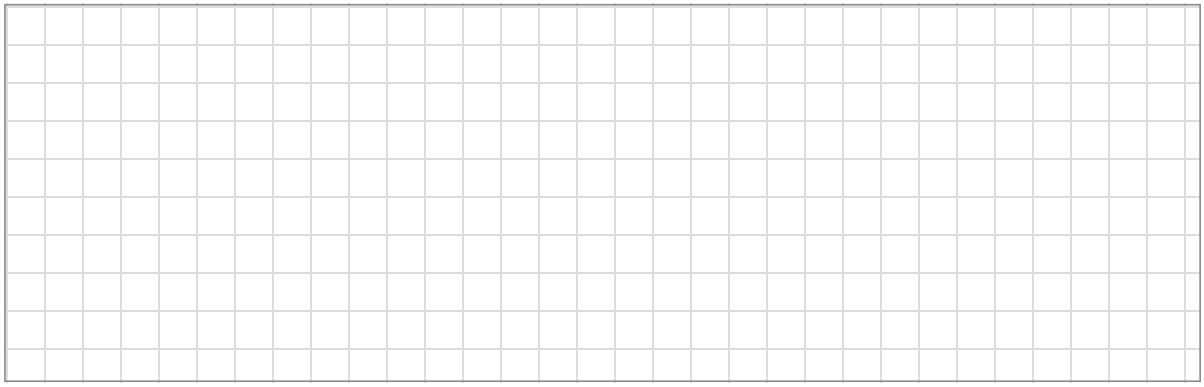
Answer the following question.

The canteen app is at version 2.3.1. Give the next number after each release, in order: (i) a new "today's specials" screen, with everything else working as before; (ii) a fix to the total; (iii) a new backup format that older versions can't read; (iv) a fix to the login screen.

## 5 Will it fit in the term? [4]

Work it out in the space below.

A team of four has 3 hours each a week for 11 working weeks. The work every project needs (the specification, testing with users, documents, the presentation) is estimated at 55 hours, the musts at 40 hours and the shoulds at 30 hours. i. How many team-hours do they have? ii. Can they plan the musts and the shoulds, and with how much to spare? iii. If every task takes a quarter longer than estimated, what happens to that plan, and what can they safely plan? iv. What should they do with the shoulds?



**Answer:** _____

## 6 Fix it now, later, or say no? [4]

Answer the following question.

Release 0.3 of a health post's stock app is due in a week. For each, decide: fix for 0.3, a later release, or no. Give a reason for each. a. A test fails: giving out more tablets than are in stock leaves a balance of −20. b. The in-charge asks for each patient's name and phone number, to call them about follow-ups. c. The monthly report takes 40 seconds on the health post's old laptop. d. A friend suggests rebuilding the app in a newer framework he likes.

## 7 An honest evaluation [3]

Answer the following question.

A school library app was tested against two success criteria. C1: The librarian lends a book in under 30 seconds. Measured: 18 s, 22 s, 25 s, 41 s, 19 s (the 41 s loan was to a student missing from the list). C2: The librarian gives the app a System Usability Scale score of 68 or more. Measured: 62.5. Give a verdict for each, with its evidence, and say what the team should do next.

## 8 Think [2]

Think, then answer.

A team's evaluation says every one of its ten success criteria was met, first time. Why might a teacher be suspicious rather than pleased? What would make the evaluation believable?

## 9 Activity: Is it a capstone? (not marked)

Work in your capstone team. Write three project ideas, each for someone you know, and weigh each against the five tests: write yes or no in each box, with a word of reason. Keep the idea that passes all five, or cut one down until it does.

| The idea, and its user (named) | Real user? | Problem seen? | Substantial? | Finishable? | Safe, legal, kind? |
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